RESEARCH HIGHLIGHT

December 2004

Socio-economic Series 04-040

FILTERING IN HOUSING

INTRODUCTION

There are at least three ways changes in housing stock can affect the well-being of lower-income households. First, aging of housing stock may reduce relative rents and prices of older dwellings as previous higher-income occupants leave for newer buildings and pass the older dwellings to lower-income households. Second is the reverse: inner-city neighbourhoods attract higher-income households that gentrify neighbourhoods and displace lower-income occupants. Third, government financial assistance to lower-income households for repairs needed for continued safe occupancy of their houses can improve housing stock.

This study focuses on the first two processes. It examines the extent to which aging of housing stock has occurred to improve the well-being of lower-income households in Canadian census metropolitan areas (CMAs). It also examines gentrification in neighbourhoods in selected CMAs.

LITERATURE REVIEW

Filtering is the movement of housing stock from higher-income to lower-income households as it deteriorates and becomes less expensive. The reduction in relative prices of older housing due to aging can improve housing conditions of lower-income households. The literature often refers to this as "welfare filtering."

There are several conditions required for welfare filtering to occur. The metropolitan area has to function as an integrated market. Households must be mobile, and be able to change neighbourhoods and make substitutions between housing and neighbourhood attributes. New units have to be added at a rate that exceeds household formation and in-migration: disequilibrium has to be created as a result of an oversupply. It also depends on the rate at which buildings depreciate in response to reduced maintenance expenditures.

The literature suggests that a government policy to stimulate filtering would cause neighbourhoods to deteriorate and would also cause private-sector owners to lose equity in their dwellings. However, the observed trend in Canadian inner cities is that neighbourhoods are being "revitalized" to make way for higher-income residents.

Empirical studies provide little evidence that welfare filtering is taking place in most growing cities in the U.S. It does, however, suggest that there may have been filtering in the immediate postwar era as the middle-class gained access to suburban homeownership. The development of suburbs in response to policy, institutional, economic, demographic and cultural changes may have created the excess supply needed to induce welfare filtering of inner-city housing. The literature review does not find empirical evidence of filtering in Canadian cities and this study is intended to address this gap.

The literature suggests that the process of gentrification is complex and varied. One thesis suggests that gentrification is the result of globalization. Another view ties gentrification to actions of key groups of individuals. Their combined effect changes the character and social composition of neighbourhoods. Gentrification is also discussed in broader literature that examines various aspects of neighbourhood renewal and downtown revitalization. The literature presents very little empirical evidence of the actual rate or level of gentrification within specific cities. There is some evidence of changing demographic trends as well as growing understanding of the interconnectedness between suburban and inner-city population growth rates.

CMHC SCHL

HOME TO CANADIANS
Canada

FILTERING—CANADIAN EMPIRICAL EVIDENCE

This section presents empirical evidence of filtering in rental and owner-occupied housing in Canadian CMAs. It uses the Census *Public-Use Microdata File* (PUMF) to examine changes in rent, house price, income and housing expenditures of households in dwellings built during five different construction periods: before 1945; 1946 to 1960; 1961 to 1970; 1971 to 1985 and 1986 to 1996, with 1996 as the baseline year. The objective is to assess the extent to which aging induces filtering of dwellings to lower-income households to ease their housing expenditure burdens. The main indicator is the change in price and rent for dwellings with the same number of rooms. Another indication of filtering is changes in the distribution of household income by age of buildings. Welfare filtering occurs when prices of dwellings decrease the most in the oldest stock *and* when lower-income households move into older dwellings and reduce the percentage of their incomes spent on housing.

Summary statistics: Dwelling and household characteristics

Statistical analysis of median rents shows only small declines for dwellings built during progressively older periods. In Toronto, Montréal, Vancouver, Ottawa-Hull, Hamilton and Oshawa, for example, median rents drop by only 7 to 9 per cent for dwellings that were 10 to 25 years old in 1996. In dwellings 50 years old or older, median rents decrease 12 per cent in Montréal and Ottawa-Hull and as much as 25 per cent in Calgary, Winnipeg, London, Trois-Rivières and Sherbrooke.

The median prices of owner-occupied dwellings vary more, with many showing decreases of 30 to 50 per cent in the oldest houses (for example, Winnipeg, Regina, Saskatoon, Windsor, St. Catharines and Kitchener). However, house prices do not drop as fast in larger cities such as Montréal, Toronto, Ottawa-Hull and Vancouver.

The analysis finds that rents for dwellings at the lowest end of the housing stock tend to increase with the age of the building. This suggests that lower-income households do not benefit from low-priced rental units. As for the ownership sector, it offers lower-income households a greater chance of becoming homeowners, because prices tend to decrease for houses in the bottom end of the stock.

Households renting in buildings that were 50 years old in 1996, on average, have about the same incomes as those living in newer buildings. In the ownership sector, however, households in older buildings have average incomes 21 per cent lower than households in newer dwellings. Again, older-ownership dwellings offer lower-income households a greater chance of becoming homeowners. The larger difference in average income across the 50-year period in the ownership sector is due, in part, to lower-income people being able to move to lower-priced older houses. It is also due to "filtering in place"; that is, filtering that can take place as a result of households staying longer in their houses while prices of their dwellings and locations increase. The "mortgage tilt" or decline in nominal payments-to-income ratios associated with the equal-payment mortgage also helps to reduce expenditure burdens as households gain equity while their incomes increase over time.

Building-type distributions vary with periods of construction. While the size of houses has increased, average room counts have remained constant over the last 50 years. The need for repair is substantially higher in older buildings. Differences in rents and prices of ownership dwellings are partly due to differences in stock characteristics.

Regression results

The "Ordinary Least Squares" (OLS) regression analysis controls for dwelling and household characteristic differences. The analysis finds no significant differences in rents across construction periods in Ottawa-Hull, Toronto, Hamilton, St. Catharines and Niagara, London and Victoria. Rents increase slightly for older buildings in Oshawa, Windsor and Vancouver. As for Winnipeg, Calgary, Sudbury and Trois-Rivières, rents drop by more than 15 per cent in buildings that are more than 50 years old. For all CMAs, rents decrease by only 7 per cent in 50-year-old buildings.

Consistent with the summary statistics, the regression analysis also shows great variability in house prices across CMAs. The price for the oldest houses in Regina and Saskatoon is 50 per cent lower than the price of the newest houses. For houses over 50 years old, St. Catharines, Kitchener and Edmonton show a 30 per cent decline in prices, followed by 11.3 per cent in Toronto and 10.1 per cent in Ottawa. As for Montréal, Vancouver and Halifax, new and old house prices show no difference. Across all CMAs, the average price for 50-year-old houses is 16 per cent lower.

The analysis finds that there are more households below the low-income cut-off (LICO) living in older dwellings. However, in the rental sector, households tend to spend a larger percentage of their incomes on rent by living in older buildings. This suggests that there is no welfare filtering, because older dwellings do not ease the housing-expenditure burden for lower-income households. For homeowners, the opposite is true. Households in older dwellings spend a smaller percentage of income on housing, which means that the aging process is making more ownership options available to lower-income households.

The analysis also examines changes over time in rents and prices as well as the relative incomes of households living in older dwellings. It considers only buildings built before 1981 and uses rents and prices for buildings built in 1980–81 as the standard. In all CMAs, average rents in dwellings built before 1980 increase relative to rents for 1980–1981 buildings. The price of ownership housing decreases in many CMAs between 1981 and 1996, but the price of older stock does not decrease as much. In fact, it increases relative to that of newer, if not the newest housing, in all CMAs identified in the 1981 census. Comparisons using 1981–1991 and 1986–1996 census data also show these trends. This reversal of rent and price changes is "upward-filtering" or "negative-filtering." In other words, older stock in Canada is, on average, getting more, rather than less, expensive over time.

Since 1981, in cities including Montréal, Vancouver and Toronto, average renter-households income in older dwellings has increased at a faster rate than changes in the average income of households in newer buildings. Higher-income households have also been moving into older ownership stock since 1991 in these cities. Increases in rents, prices and household incomes in older stock suggest a reversed filtering process is occurring in Canadian CMAs.

GENTRIFICATION

This section develops profiles of gentrified neighbourhoods and identifies the main factors that contribute to gentrification in specific neighbourhoods. The profiles are based on an analysis of 1981 and 2001 census data and examine variables such as rent, income and age of dwellings to determine census tracts that are gentrifying in Halifax, Québec City, Montréal, Ottawa, Kingston, Toronto, Winnipeg, Regina, Edmonton and Vancouver.

The key attributes of gentrifying neighbourhoods are:

- Proximity to the central business district (CBD);
- Higher population and dwelling densities;
- Increasing dwelling densities;
- More diverse housing stock, particularly a large proportion of "other" dwelling units;
- Higher shares of older housing stock and a better ability to retain older units over time;
- Rapid increase in average rents and personal incomes;
- Larger percentage of single-person households;
- Faster decline in persons per households;
- More mobile population;
- Higher share of young adults (25-39 years); and,
- Higher and rapidly increasing proportion of population with a university education.

Factors that contribute to gentrification include, first and foremost, centrality. In all CMAs studied, gentrifying tracts are, on average, closer to the CBD than any other tracts. This trend indicates preferences by gentrifying households for amenities such as employment, shopping and entertainment. Another key factor is proximity to big employment generators; Edmonton's Royal Alex Hospital and Vancouver General Hospital, for example, have stimulated gentrification in their surrounding neighbourhoods. Gentrification may also be the result of spillover of upper-income households from adjacent, more affluent neighbourhoods (for example, Ottawa's Rockcliffe Park; Montréal's Mont Royal and Kingston's Sydenham Ward); redevelopment of inner-city neighbourhoods (such as Ottawa's Le Breton Flats and Vancouver's False Creek); and/or, strong identity, character and diverse housing types (as is the case in Edmonton's Strathcona, Ottawa's Preston Street, and Winnipeg's Wolseley).

Interviews with local housing experts suggest that about 5 per cent of 2,182 census tracts in the 10 CMAs studied have been gentrified since 1981. Their increases in rents and incomes are mainly due to redevelopment and replacement, rather than renewal of old neighbourhoods. The fact that there is gentrification in Canadian cities suggests that filtering cannot be relied upon as the only mechanism to increase housing supply for lower-income households.

CONCLUSIONS

This study indicates no welfare filtering in Canadian rental markets. While some CMAs have rents lowered by 10 to 15 per cent in their 50-year-old buildings, the difference is too small over a too long a period to be of interest to policy makers. The fact that households spend a larger percentage of their incomes on rents in older buildings is another indication that the aging process is not making rental stock more affordable to lower-income households.

As for the homeownership sector, the study shows steeper price differences across buildings of different ages: 50-year-old houses may be 30 per cent lower in price than new houses in some CMAs, but differences are much smaller in large cities with high housing prices. Nevertheless, welfare filtering is evident as households in older houses spend a smaller percentage of their incomes on housing. Aging makes more ownership options available to lower-income households in small CMAs but would take much more time to occur in large cities.

There is no reason to believe that welfare filtering can be relied on to ease the expenditure burdens of lower-income households, even with policies to encourage an oversupply of housing that can charge economic rents and prices. Current trends, driven by changes in the economy, demographics and policy are likely to continue to inflate the prices of older dwellings. These trends are restructuring inner cities and reducing the supply of lower-priced housing. Especially in growing cities, filtering is likely not a solution to the affordability problems of low-income households.

CMHC Project Manager: Jessica Yen

Research Report: *The Efficacy of the Filtering Process in the Supply of Housing to Lower-Income Canadian Households*

Research Consultants: Professors Andrejs Skaburskis and John Meligrana, School of Urban and Regional Planning, Queen's University, Kingston, Ont.

Housing Research at CMHC

Under Part IX of the *National Housing Act*, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research.

This fact sheet is one of a series intended to inform you of the nature and scope of CMHC's research.

To find more *Research Highlights* plus a wide variety of information products, visit our Web site at

www.cmhc.ca

or contact:

Canada Mortgage and Housing Corporation
700 Montreal Road
Ottawa, Ontario
K1A 0P7

Phone: 1 800 668-2642
Fax: 1 800 245-9274

OUR WEB SITE ADDRESS: www.cmhc.ca

Although this information product reflects housing experts' current knowledge, it is provided for general information purposes only. Any reliance or action taken based on the information, materials and techniques described are the responsibility of the user. Readers are advised to consult appropriate professional resources to determine what is safe and suitable in their particular case. Canada Mortgage and Housing Corporation assumes no responsibility for any consequence arising from use of the information, materials and techniques described.

63795